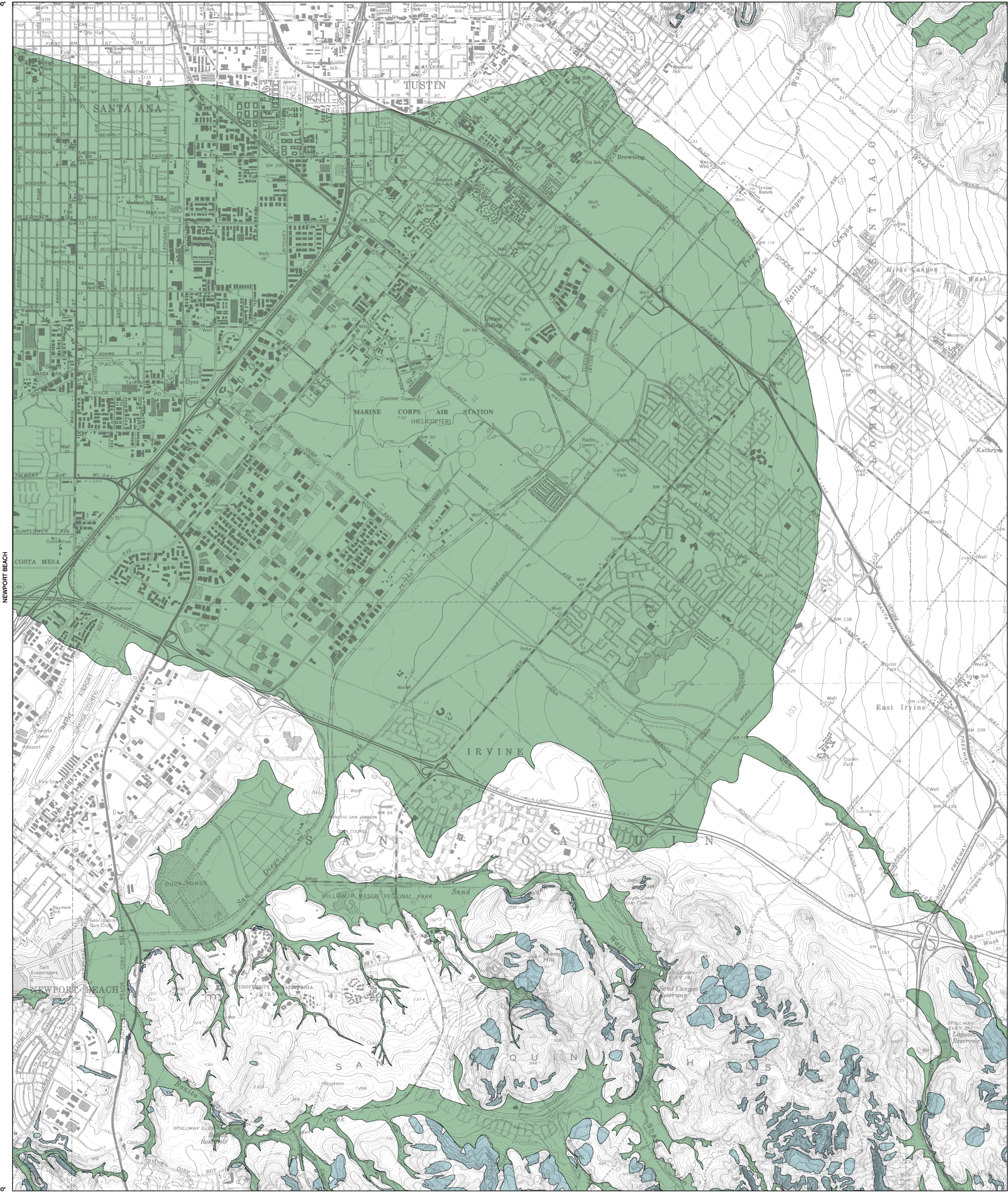


33°45'00"

ORANGE

33°45'00"



33°37'30"

LAGUNA BEACH

117°45'00"

33°37'30"

Base Map prepared by U.S. Geological Survey, 1965, photorevised 1981

#### PURPOSE OF MAP

This map will assist cities and counties in fulfilling their responsibilities for protecting the public safety from the effects of earthquake-triggered ground failure as required by the Seismic Hazards Mapping Act (Public Resources Code Sections 2690-2699.6).

For information regarding the scope and recommended methods to be used in conducting the required site investigations, see DMG Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California.

For a general description of the Seismic Hazards Mapping Program, the Seismic Hazards Mapping Act and regulations, and related information, please refer to the draft User's Guide (see <http://www.consrv.ca.gov/dmg/shezp/userguid/>).

Production of this map was funded by the Federal Emergency Management Agency's Hazard Mitigation Program and the Department of Conservation in cooperation with the Governor's Office of Emergency Services.

#### IMPORTANT - PLEASE NOTE

- 1) This map may not show all areas that have the potential for liquefaction, landsliding, strong earthquake ground shaking or other earthquake and geologic hazards. Also, a single earthquake capable of causing liquefaction or triggering landslide failure will not uniformly affect the entire area zoned.
- 2) Liquefaction zones may also contain areas susceptible to the effects of earthquake-induced landslides. This situation typically exists at or near the toe of existing landslides, downslope from rockfall or debris flow source areas, or adjacent to steep stream banks.
- 3) This map does not show Alquist-Prilo earthquake fault zones, if any, that may exist in this area. Please refer to the latest official map of earthquake fault zones for disclosures and other actions that are required by the Alquist-Prilo Earthquake Fault Zoning Act. For more information on this subject and an index to available maps, see DMG Special Publication 42.
- 4) Landslide zones on this map were determined, in part, by adapting methods originally developed by the U.S. Geological Survey (USGS). Landslide hazard maps prepared by the USGS typically use experimental approaches to assess earthquake-induced and other types of landslide hazards. Although aspects of these new methodologies may be incorporated in future DMG seismic hazard zone maps, USGS maps should not be used as substitutes for Official SEISMIC HAZARD ZONES maps.
- 5) U.S. Geological Survey base map standards provide that 90 percent of cultural feature be located within 40 feet (horizontal accuracy) at the scale of this map. The identification and location of liquefaction and earthquake-induced landslide zones are based on available data. However, the quality of data used is varied. The zone boundaries depicted have been drawn as accurately as possible at this scale.
- 6) Information on this map is not sufficient to serve as a substitute for the geologic and geotechnical site investigations required under Chapters 7.5 and 7.8 of Division 2 of the Public Resources Code.
- 7) **DISCLAIMER:** The State of California and the Department of Conservation make no representations or warranties regarding the accuracy of the data from which these maps were derived. Neither the State nor the Department shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.

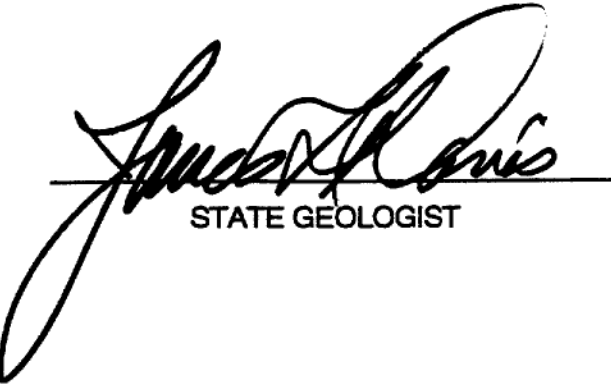
## STATE OF CALIFORNIA SEISMIC HAZARD ZONES

*Delineated in compliance with  
Chapter 7.8, Division 2 of the California Public Resources Code  
(Seismic Hazards Mapping Act)*

### TUSTIN QUADRANGLE

## OFFICIAL REVISED MAP

Released: January 17, 2001

  
STATE GEOLOGIST

#### MAP EXPLANATION

##### Zones of Required Investigation:

###### Liquefaction



Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

###### Earthquake-Induced Landslides



Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

DATA AND METHODOLOGY USED TO DEVELOP  
THIS MAP ARE PRESENTED IN THE FOLLOWING:

Seismic Hazard Evaluation of the Tustin 7.5 minute quadrangle, Los Angeles County, California: California Division of Mines and Geology, Open-File Report 97-20.

For additional information on seismic hazards in this map area, the rationale used for zoning, and additional references consulted, refer to DMG's World Wide Web site (<http://www.consrv.ca.gov/dmg/>).

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